

REMARKS/ARGUMENTS

Claims 9, 10, 13, 15, 17, 19, 21 and 23 are pending herein. Claims 11, 12, 14, 16, 18, 20, 22 and 24 have been cancelled hereby without prejudice or disclaimer.

This Amendment is proper under Rule 116 because it does not raise any new issues and places the application in better form for appeal by canceling the withdrawn claims. Thus, entry of this Amendment is respectfully requested.

1. Claims 11, 12, 14, 16, 18, 20, 22 and 24 have been withdrawn from consideration as being drawn to a non-elected invention, and thus have been cancelled without prejudice or disclaimer. Applicant presently intends to file a divisional application for the non-elected claims, and thus reserves the right under 35 USC §121.

2. Claims 9, 10, 13, 15, 17, 19 and 23 were rejected under §103(a) over Grabbe in view of Distefano and further in view of Kinsman. Applicant respectfully traverses this rejection.

Independent claim 9 recites a manufacturing method for making a conduction assist member having a plurality of conduction members disposed in a plurality of through holes formed in an insulating elastic sheet. The method includes a first step of forming a plurality of through holes in each of two films comprising an insulating elastic material at locations corresponding to each other, each of the through holes extending through each of the films from a first opening to an opposed second opening. The method also includes a second step of forming, from a conductive material, a structure comprising a plurality of cut pieces linked to one another in a linear manner. Each of the cut pieces have at least one cut defining at least two blades. The method also includes a third step of disposing the structure between the two films, so that each of the cut pieces is disposed in a respective one of the through holes, and bringing the films together into thermal press contact to form a sheet. The method further includes a fourth step of cutting the cut pieces from one another and bending at least one of the at least two blades toward the first opening portion of a

respective one of the through holes so that an end portion of the at least one blade protrudes from the first opening portion on the same surface of the sheet.

On the other hand, referring to Figs. 6 and 7 of Grabbe, the primary reference discloses a method of making a conduction assist member having a plurality of conduction members (contact members 44) disposed in a plurality of through holes (apertures 56) formed in an insulating elastic sheet (dielectric polyimide film 54). The dielectric layers 54 are perforated in a pattern corresponding to the placement of the contact members 44 and then the conductive sheet 46, including the plurality of contact members 44 that are interconnected by narrow strips 48 and peripheral strips 50, are sandwiched between two layers of dielectric material 54. The layers 54 are aligned with the conductive sheet 46 and bonded to form a laminate. The laminate is then perforated to sever the strips and separate the contact members 44 from each other. The contact members 44 are bent along the bend line 62 (see Fig. 6) (see Grabbe, Col. 4, line 33—Col. 5, line 14).

As the PTO correctly noted, however, that among other deficiencies, there is no disclosure or suggestion in Grabbe of bringing the two films 54 together into thermal press contact to form a sheet, as recited in claim 9. That is, in the Office Action, the PTO admitted that Grabbe "fails to disclose thermal compression, punching through the sheet and bending by punching, circular through holes in a range of .2 to 1.2 mm, and pitch of through holes in a range of .25 to 1.5 mm" (Office Action, section 2, lines 6-8). The PTO relied on Distefano as allegedly disclosing thermal compression. Applicant respectfully submits, however, that Distefano does not disclose forming a contact sheet laminate by thermal press contact, as the PTO asserted.

Distefano relates to an electrical connection member with inwardly deformable contacts that are forcibly engaged with the contact pads of circuit panels. Referring to Fig. 3 of Distefano, the contacts 70, 90 are forcibly engaged with the contact pads 81, 97 of the circuit panels. The contacts deform so that the central portion 75 of the contacts enter the holes 83 defined by the contact pads. "As the interposer 50 and the circuit panels 80, 92 are forced together, the peripheral portions 74 are forced

vertically downward, toward the body 60 of the interposer, wiping the contact pads. Wiping is concentrated at the edges 84 of the hole" (see Distefano, Col. 11, lines 10-19).

Distefano also recites that the compliant layer 62 permits the peripheral portion 74 of the contact to deform in a downward direction, and that it is the compliant layer 62 which yields in response to the bending of the peripheral portion 74. Applicant respectfully submits that Distefano discloses that the *compliant layer 62* is an *adhesive* that may be pressure-activatable, or alternatively, may be a heat activatable adhesive. In that case, Distefano recites that "the assembly is heated after the *interposer and the circuit panel are pressed together in order to activate the adhesive and the bond the two elements together*" (see Distefano, Col. 11, lines 43-51, emphasis added).

In view of the above, Applicant respectfully submits that if one skilled in the art applied the "thermal compression" taught by Distefano to the structure of Grabbe, then the alleged "thermal compression" would actually have been performed between the outer surfaces of Grabbe's dielectric films 54 and electronic devices (such as a circuit panel, for example) provided on either side of the structure shown in Grabbe's Fig. 7, but not between the layers 54 to form a sheet with the conductive sheet 46 sandwiched in between, as claimed.

Thus, Applicant respectfully submits that the asserted combination of references still does not disclose, or even suggest, each and every step of the method recited in independent claim 9.

Moreover, although claim 10 was included under this rejection, Applicant respectfully submits that there is no disclosure or suggestion in any of the applied references (an in particular, the Kinsman reference) of singulating individual contacts from one another by a punching step or bending the contact members, using a punching step, as recited in claim 9. That is, Fig. 4B of Kinsman, on which the PTO relied, merely shows a forming apparatus 64 that forms the leads 44A in a "butt joint configuration" (Kinsman, Col. 6, line 45), but the apparatus in Fig. 4B of Kinsman merely presses the ends of the contacts 44A into the configuration shown in Kinsman

Fig. 3FA. In fact, Applicant respectfully submits that Kinsman only discloses shearing or cutting to singulate each die 10 from the leadframe 12 (see Kinsman, Col. 5, lines 59-61). In view of the above, Applicant respectfully submits that one of ordinary skill in the art would not have been motivated to use punching, based on Kinsman, or to use the apparatus shown in Fig. 4B of Kinsman, for example, to singulate the contacts and punch bend the contact blades of Grabbe, as the PTO suggested.

For at least the foregoing reasons, Applicant respectfully submits that all claims pending herein define patentable subject matter over the art of record. Accordingly, Applicant respectfully requests that the above rejection be reconsidered and withdrawn.

3. Claim 21 was rejected under §103(a) over Grabbe in view of Distefano and Kinsman and further in view of Boyd. Applicant respectfully traverses this rejection.

Independent claim 9 is discussed above in section 2. Claim 21 depends from claim 9.

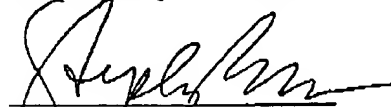
Applicant respectfully submits that Boyd does not overcome the above-mentioned deficiencies of the primary, secondary and tertiary references. Since independent claim 9 defines patentable subject matter over the applied references, Applicant respectfully submits that claim 21 likewise defines patentable subject matter by virtue of its dependency from independent claim 9.

For at least the foregoing reasons, Applicant respectfully requests that the above rejection be reconsidered and withdrawn.

If the Examiner believes that contact with Applicant's attorney would be advantageous toward the disposition of this case, the Examiner is herein requested to call Applicant's attorney at the phone number noted below.

The Commissioner is hereby authorized to charge any additional fees associated with this communication or credit any overpayment to Deposit Account No. 50-1446.

Respectfully submitted,



Stephen P. Burr
Reg. No. 32,970

February 4, 2004

Date

SPB/NB/gmh

BURR & BROWN
P.O. Box 7068
Syracuse, NY 13261-7068

Customer No.: 025191
Telephone: (315) 233-8300
Facsimile: (315) 233-8320